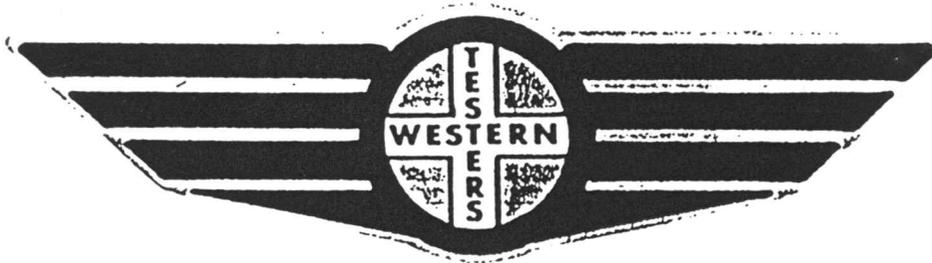


FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY K & E PETROLEUM, INC

LEASE & WELL NO. JOHNSON A-1

SEC. 33 TWP. 6S RGE. 21W TEST NO. 4 DATE 7/12/87

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 7-12-87 TICKET : 12922
CUSTOMER : K & E PETROLEUM INC. LEASE : JOHNSON
WELL : A-1 TEST: 4 GEOLOGIST : T. PRIEST
ELEVATION : 2230 GL FORMATION : LANS "B & D"
SECTION : 33 TOWNSHIP : 6S
RANGE : 21W COUNTY : GRAHAM STATE : KANSAS
GAUGE SN# : 13549 RANGE : 4100 CLOCK : 12

INTERVAL FROM : 3505 TO : 3545 TOTAL DEPTH : 3545
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 3500 SIZE : 6.63
PACKER DEPTH : 3505 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ABERCROMBIE RIG #4
MUD TYPE : CHEMICAL VISCOSITY : 48
WEIGHT : 9.5 WATER LOSS (CC) : 10.8
CHLORIDES (PPM) : 6000
JARS-MAKE : - SERIAL NUMBER :
DID WELL FLOW ? : - REVERSED OUT ? : -

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 569 FT I.D. inch : 2.75
DRILL PIPE LENGTH : 2914 FT I.D. inch : 3.80
TEST TOOL LENGTH : 22 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 40 FT ANCHOR SIZE : 5.50
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5 XH

BLOW COMMENT #1 : INITIAL FLOW-WEAK BLOW-BUILDING OFF BOTTOM IN
25 MINUTES.

BLOW COMMENT #2 : FINAL FLOW-WEAK BLOW-BUILDING OFF BOTTOM IN
40 MINUTES.

BLOW COMMENT #3 :

BLOW COMMENT #4 :

RECOVERED : 700 FT OF: WATER

CHLORIDES: 60000 PPM

Total Barrels Fluid = 6.02
Total Fluid Prod Rate = 72.21 BFPD
Indicated Wtr Rate = 72.21 BWPD

REMARK 1 :
REMARK 2 :
REMARK 3 :
REMARK 4 :

SET PACKER(S) : 5:45 PM

TIME STARTED OFF BOTTOM : 10:15 PM

WELL TEMPERATURE : 110

INITIAL HYDROSTATIC PRESSURE

(A) 1733

INITIAL FLOW PERIOD MIN: 45

(B) 52 PSI TO (C) : 169

INITIAL CLOSED IN PERIOD MIN: 60

(D) 1209

FINAL FLOW PERIOD MIN: 75

(E) 210 PSI TO (F) : 335

FINAL CLOSED IN PERIOD MIN: 93

(G) 1193

FINAL HYDROSTATIC PRESSURE

(H) 1681

WESTERN TESTING CO. INC.
WICHITA - KANSAS

Pressure Transient Report

COMPANY : K & E PETROLEUM INC.
RIG : GRAHAM-KANSAS
FIELD : JOHNSON
WELL : A-1
DATE : 7-12-87
GAUGE NO : 13549

OPERATIONAL COMMENTS

COMPANY : K & E PETROLEUM INC.
 WELL : A-1
 GAUGE # : 13549
 DATE : 12/ 7/87

FIELD : JOHNSON
 JOB # : 12922
 DEPTH : 3545
 TEST :

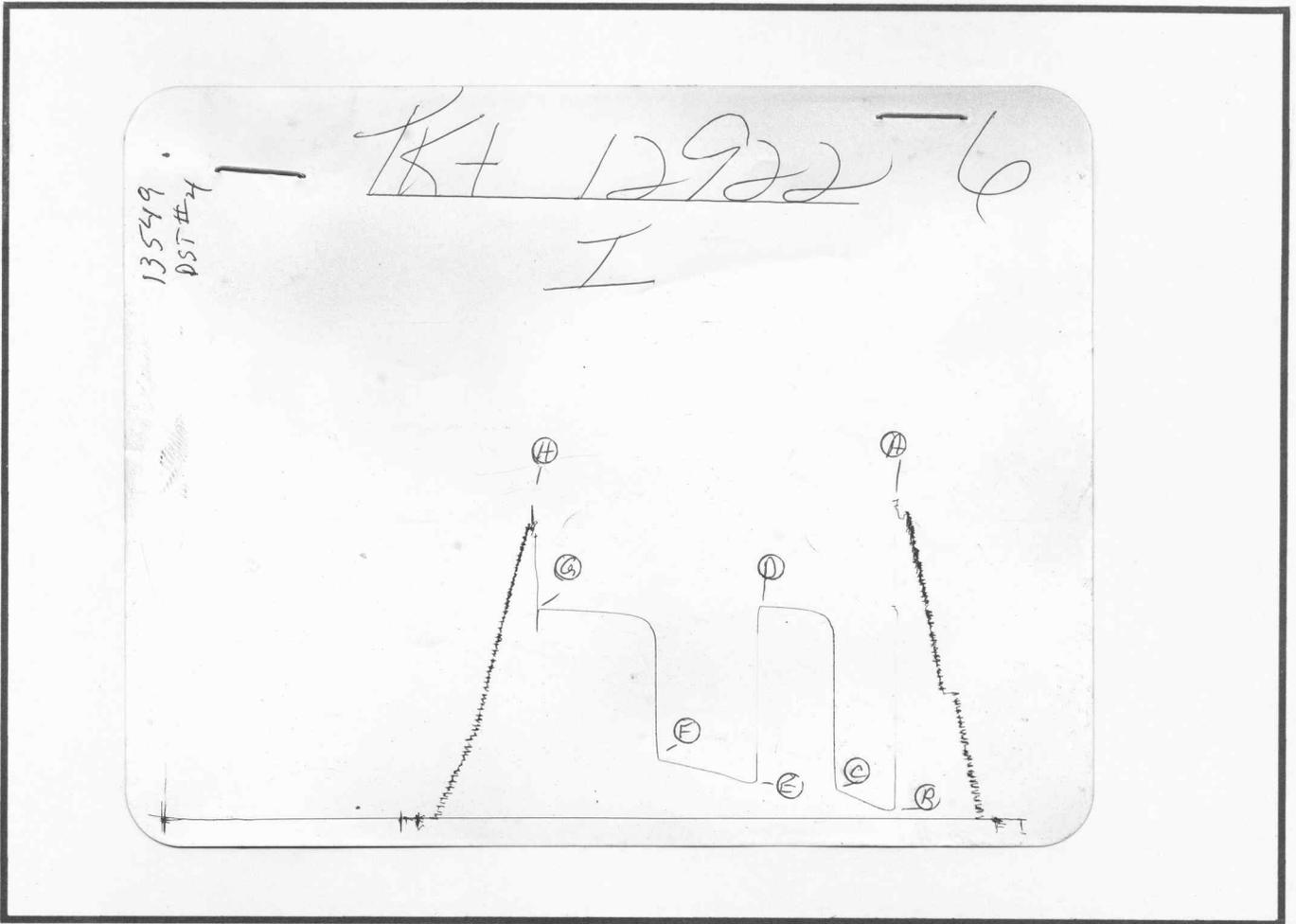
DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	5:45: 0	0.000	52.000	110.00	0.000
2	5:49:59	0.083	52.000	110.00	0.000
3	5:55: 0	0.167	63.000	110.00	11.000
4	6: 0: 0	0.250	76.000	110.00	13.000
5	6: 4:59	0.333	92.000	110.00	16.000
6	6:10: 0	0.417	107.000	110.00	15.000
7	6:15: 0	0.500	123.000	110.00	16.000
8	6:19:59	0.583	140.000	110.00	17.000
9	6:25: 0	0.667	155.000	110.00	15.000
10	6:30: 0	0.750	169.000	110.00	14.000
11	6:33: 0	0.800	779.000	110.00	610.000
12	6:36: 0	0.850	1118.000	110.00	339.000
13	6:39: 0	0.900	1145.000	110.00	27.000
14	6:42: 0	0.950	1160.000	110.00	15.000
15	6:45: 0	1.000	1172.000	110.00	12.000
16	6:48: 0	1.050	1178.000	110.00	6.000
17	6:51: 0	1.100	1184.000	110.00	6.000
18	6:54: 0	1.150	1188.000	110.00	4.000
19	6:57: 0	1.200	1193.000	110.00	5.000
20	7: 0: 0	1.250	1195.000	110.00	2.000
21	7: 3: 0	1.300	1198.000	110.00	3.000
22	7: 6: 0	1.350	1199.000	110.00	1.000
23	7: 9: 0	1.400	1200.000	110.00	1.000
24	7:12: 0	1.450	1202.000	110.00	2.000
25	7:15: 0	1.500	1204.000	110.00	2.000
26	7:18: 0	1.550	1205.000	110.00	1.000
27	7:21: 0	1.600	1206.000	110.00	1.000
28	7:24: 0	1.650	1207.000	110.00	1.000
29	7:27: 0	1.700	1208.000	110.00	1.000
30	7:30: 0	1.750	1209.000	110.00	1.000
31	7:31: 0	1.767	210.000	110.00	-999.000
32	7:34:59	1.833	210.000	110.00	0.000
33	7:40: 0	1.917	214.000	110.00	4.000
34	7:45: 0	2.000	225.000	110.00	11.000
35	7:49:59	2.083	240.000	110.00	15.000
36	7:55: 0	2.167	252.000	110.00	12.000
37	8: 0: 0	2.250	263.000	110.00	11.000
38	8: 4:59	2.333	272.000	110.00	9.000
39	8:10: 0	2.417	279.000	110.00	7.000
40	8:15: 0	2.500	289.000	110.00	10.000
41	8:19:59	2.583	298.000	110.00	9.000
42	8:25: 0	2.667	306.000	110.00	8.000
43	8:30: 0	2.750	315.000	110.00	9.000
44	8:34:59	2.833	322.000	110.00	7.000
45	8:40: 0	2.917	330.000	110.00	8.000
46	8:45: 0	3.000	335.000	110.00	5.000
47	8:48: 0	3.050	1058.000	110.00	723.000
48	8:51: 0	3.100	1100.000	110.00	42.000
49	8:54: 0	3.150	1122.000	110.00	22.000
50	8:57: 0	3.200	1135.000	110.00	13.000
51	9: 0: 0	3.250	1144.000	110.00	9.000
52	9: 3: 0	3.300	1151.000	110.00	7.000

COMPANY : K & E PETROLEUM INC.
WELL : A-1
GAUGE # : 13549
DATE : 12/ 7/87

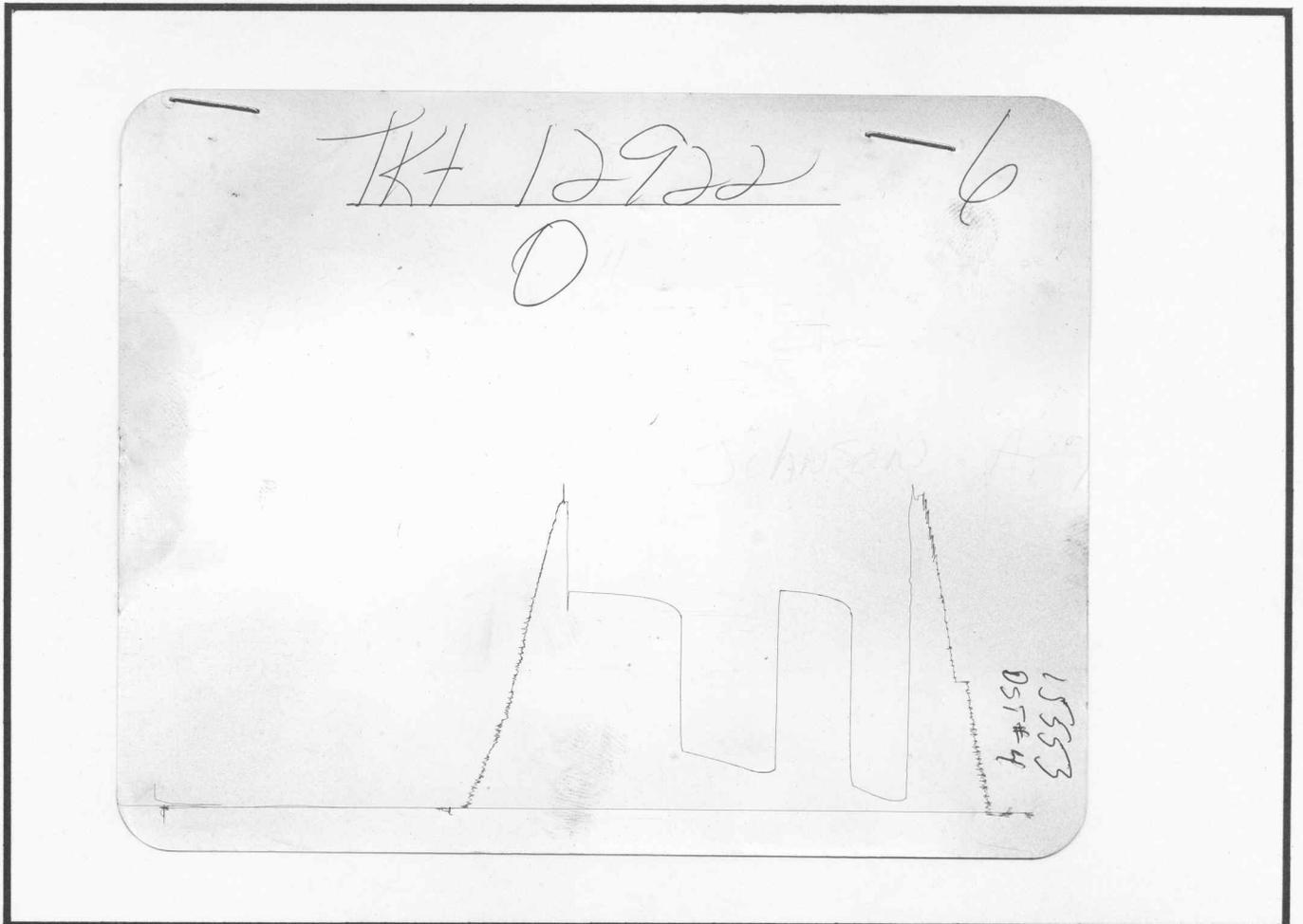
FIELD : JOHNSON
JOB # : 12922
DEPTH : 3545
TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P P _i -P _(i-1)
53	9: 6: 0	3.350	1156.000	110.00	5.000
54	9: 9: 0	3.400	1161.000	110.00	5.000
55	9:12: 0	3.450	1164.000	110.00	3.000
56	9:15: 0	3.500	1167.000	110.00	3.000
57	9:18: 0	3.550	1168.000	110.00	1.000
58	9:21: 0	3.600	1169.000	110.00	1.000
59	9:24: 0	3.650	1170.000	110.00	1.000
60	9:27: 0	3.700	1172.000	110.00	2.000
61	9:30: 0	3.750	1175.000	110.00	3.000
62	9:33: 0	3.800	1178.000	110.00	3.000
63	9:36: 0	3.850	1179.000	110.00	1.000
64	9:39: 0	3.900	1180.000	110.00	1.000
65	9:42: 0	3.950	1181.000	110.00	1.000
66	9:45: 0	4.000	1182.000	110.00	1.000
67	9:48: 0	4.050	1183.000	110.00	1.000
68	9:51: 0	4.100	1184.000	110.00	1.000
69	9:54: 0	4.150	1185.000	110.00	1.000
70	9:57: 0	4.200	1186.000	110.00	1.000
71	10: 0: 0	4.250	1187.000	110.00	1.000
72	10: 3: 0	4.300	1188.000	110.00	1.000
73	10: 6: 0	4.350	1189.000	110.00	1.000
74	10: 9: 0	4.400	1190.000	110.00	1.000
75	10:12: 0	4.450	1191.000	110.00	1.000
76	10:15: 0	4.500	1192.000	110.00	1.000
77	10:18: 0	4.550	1193.000	110.00	1.000

WESTERN TESTING CO. INC.

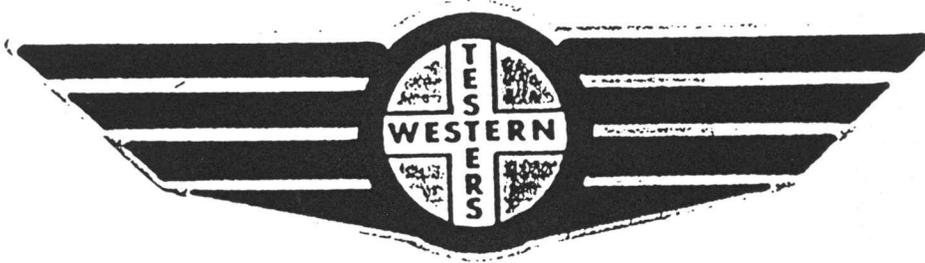


Inside Recorder



Outside Recorder

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY

K & E PETROLEUM, INC

LEASE & WELL NO. JOHNSON A-1

SEC. 33 TWP. 6S RGE. 21W TEST NO. 5 DATE 7/13/87

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 7-13-87 TICKET : 12923
CUSTOMER : K & E PETROLEUM INC. LEASE : JOHNSON
WELL : A-1 TEST: 5 GEOLOGIST : T. PRIEST
ELEVATION : 2230 GL FORMATION : LANSING "F"
SECTION : 33 TOWNSHIP : 6S
RANGE : 21W COUNTY : GRAHAM STATE : KANSAS
GAUGE SN# : 13549 RANGE : 4100 CLOCK : 12

INTERVAL FROM : 3546 TO : 3566 TOTAL DEPTH : 3566
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 3541 SIZE : 6.63
PACKER DEPTH : 3546 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ABERCROMBIE RIG #4
MUD TYPE : CHEMICAL VISCOSITY : 48
WEIGHT : 9.5 WATER LOSS (CC) : 10.8
CHLORIDES (PPM) : 6000
JARS-MAKE : - SERIAL NUMBER : -
DID WELL FLOW ? : - REVERSED OUT ? : -

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 569 FT I.D. inch : 2.75
DRILL PIPE LENGTH : 2955 FT I.D. inch : 3.80
TEST TOOL LENGTH : 22 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 20 FT ANCHOR SIZE : 5.50
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5 XH

BLOW COMMENT #1 : INITIAL FLOW-FAIR BLOW-OFF BOTTOM IN 7 MINUTES.
BLOW COMMENT #2 : FINAL FLOW-FAIR BLOW-OFF BOTTOM IN 10 MINUTES.
BLOW COMMENT #3 :
BLOW COMMENT #4 :

RECOVERED : 990 FT OF: WATER

CHLORIDES: 73000 PPM

Total Barrels Fluid = 10.08
Total Fluid Prod Rate = 161.36 BFPD
Indicated Wtr Rate = 161.36 BWPD

REMARK 1 :
REMARK 2 :
REMARK 3 :
REMARK 4 :

SET PACKER(S) : 6:45 AM

TIME STARTED OFF BOTTOM : 9:45 AM

WELL TEMPERATURE : 110

INITIAL HYDROSTATIC PRESSURE

(A) 1753

INITIAL FLOW PERIOD MIN: 45

(B) 96 PSI TO (C) : 316

INITIAL CLOSED IN PERIOD MIN: 45

(D) 1071

FINAL FLOW PERIOD MIN: 45

(E) 373 PSI TO (F) : 481

FINAL CLOSED IN PERIOD MIN: 45

(G) 1057

FINAL HYDROSTATIC PRESSURE

(H) 1725

WESTERN TESTING CO. INC.
WICHITA - KANSAS

Pressure Transient Report

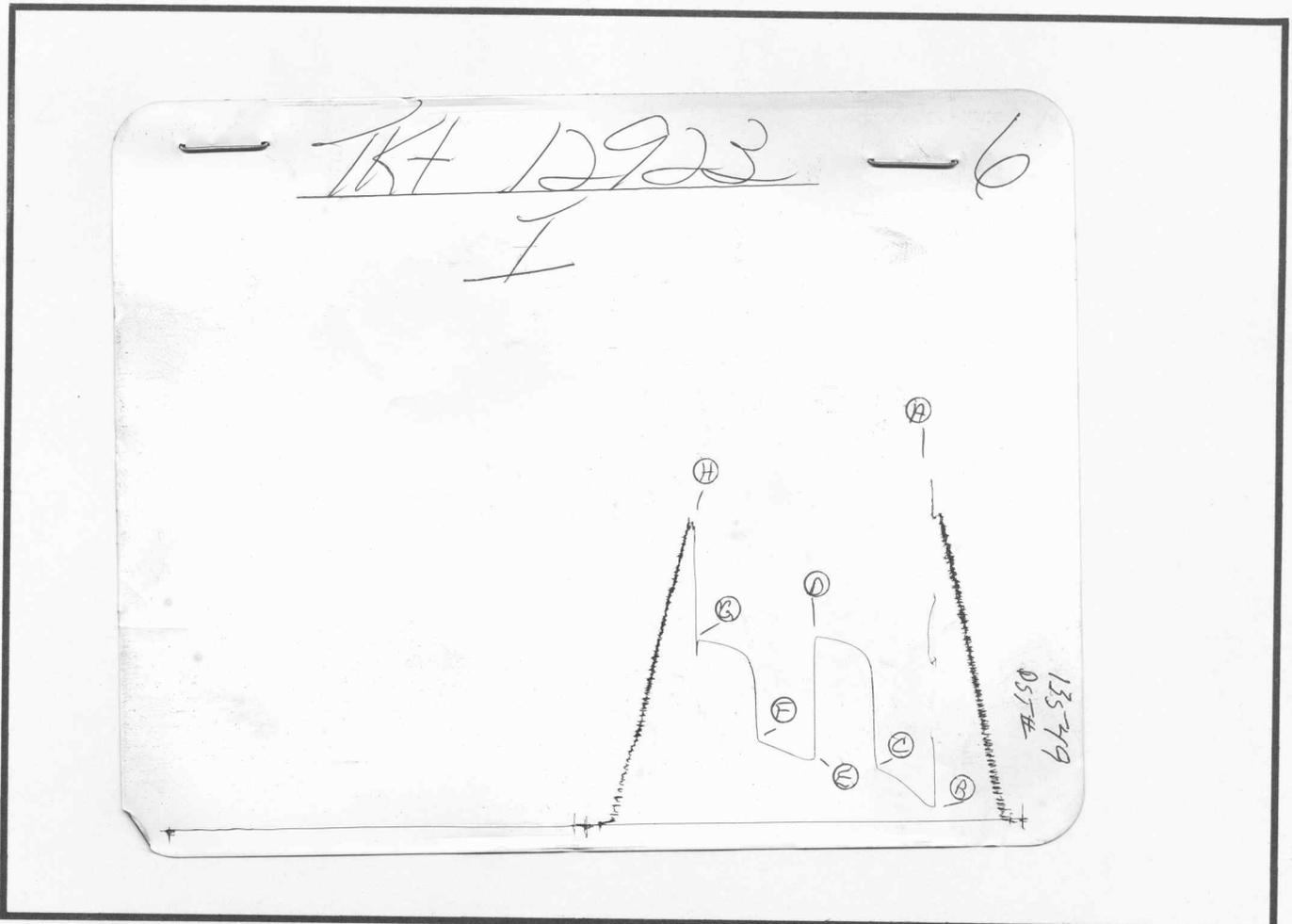
COMPANY : K & E PETROLEUM INC.
RIG : GRAHAM-KANSAS
FIELD : JOHNSON
WELL : A-1
DATE : 7-13-87
GAUGE NO : 13549

OPERATIONAL COMMENTS

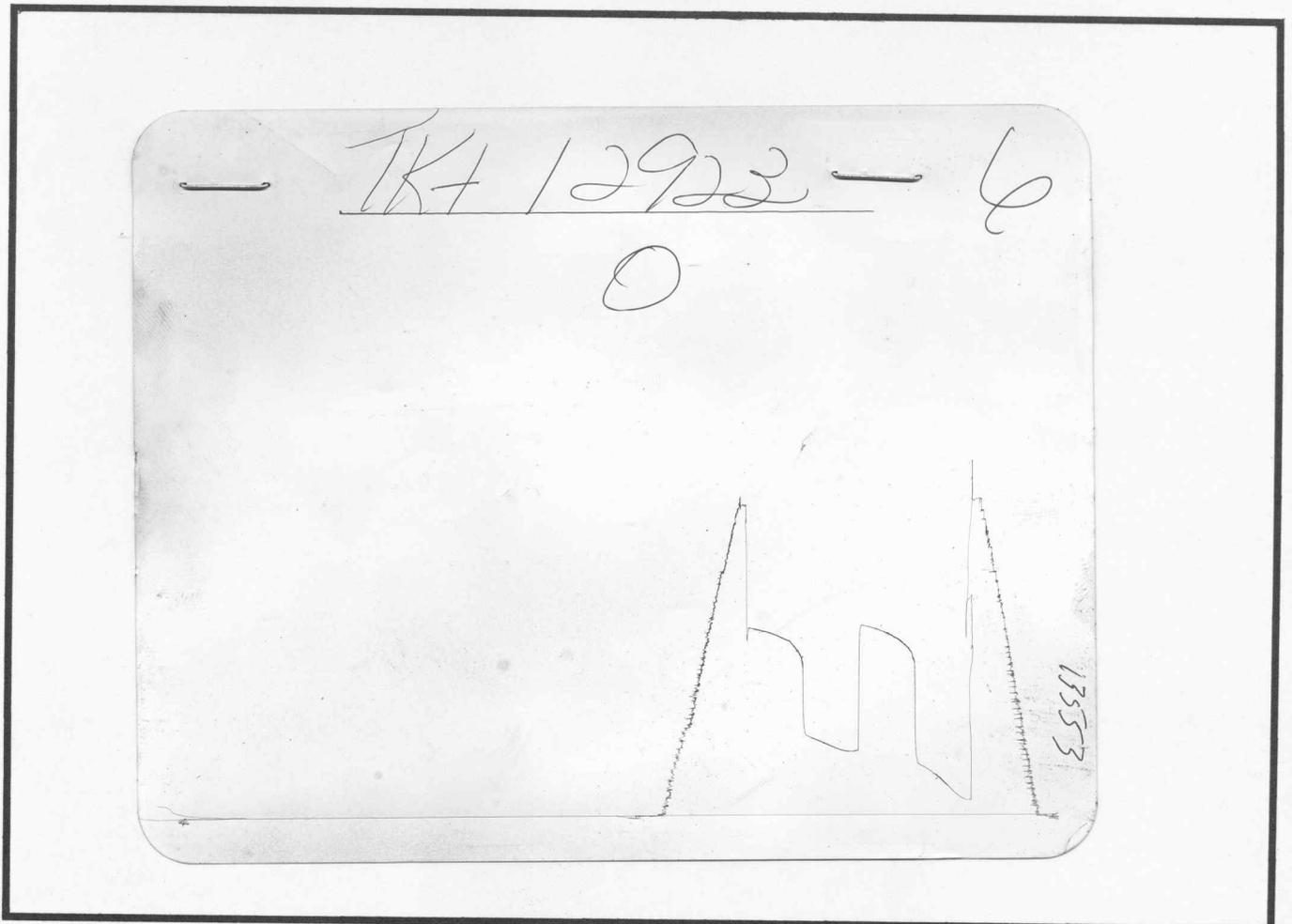
COMPANY : K & E PETROLEUM INC.
 WELL : A-1
 GAUGE # : 13549
 DATE : 13/ 7/87

FIELD : JOHNSON
 JOB # : 12923
 DEPTH : 3566
 TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	6:45: 0	0.000	96.000	110.00	0.000
2	6:49:59	0.083	100.000	110.00	4.000
3	6:55: 0	0.167	127.000	110.00	27.000
4	7: 0: 0	0.250	164.000	110.00	37.000
5	7: 4:59	0.333	196.000	110.00	32.000
6	7:10: 0	0.417	231.000	110.00	35.000
7	7:15: 0	0.500	258.000	110.00	27.000
8	7:19:59	0.583	281.000	110.00	23.000
9	7:25: 0	0.667	298.000	110.00	17.000
10	7:30: 0	0.750	316.000	110.00	18.000
11	7:33: 0	0.800	787.000	110.00	471.000
12	7:36: 0	0.850	941.000	110.00	154.000
13	7:39: 0	0.900	969.000	110.00	28.000
14	7:42: 0	0.950	990.000	110.00	21.000
15	7:45: 0	1.000	1005.000	110.00	15.000
16	7:48: 0	1.050	1017.000	110.00	12.000
17	7:51: 0	1.100	1028.000	110.00	11.000
18	7:54: 0	1.150	1035.000	110.00	7.000
19	7:57: 0	1.200	1043.000	110.00	8.000
20	8: 0: 0	1.250	1049.000	110.00	6.000
21	8: 3: 0	1.300	1053.000	110.00	4.000
22	8: 6: 0	1.350	1059.000	110.00	6.000
23	8: 9: 0	1.400	1064.000	110.00	5.000
24	8:12: 0	1.450	1068.000	110.00	4.000
25	8:15: 0	1.500	1071.000	110.00	3.000
26	8:16: 0	1.517	373.000	110.00	-698.000
27	8:19:59	1.583	373.000	110.00	0.000
28	8:25: 0	1.667	381.000	110.00	8.000
29	8:30: 0	1.750	396.000	110.00	15.000
30	8:34:59	1.833	413.000	110.00	17.000
31	8:40: 0	1.917	427.000	110.00	14.000
32	8:45: 0	2.000	443.000	110.00	16.000
33	8:49:59	2.083	456.000	110.00	13.000
34	8:55: 0	2.167	473.000	110.00	17.000
35	9: 0: 0	2.250	481.000	110.00	8.000
36	9: 3: 0	2.300	856.000	110.00	375.000
37	9: 6: 0	2.350	924.000	110.00	68.000
38	9: 9: 0	2.400	968.000	110.00	44.000
39	9:12: 0	2.450	986.000	110.00	18.000
40	9:15: 0	2.500	998.000	110.00	12.000
41	9:18: 0	2.550	1008.000	110.00	10.000
42	9:21: 0	2.600	1017.000	110.00	9.000
43	9:24: 0	2.650	1026.000	110.00	9.000
44	9:27: 0	2.700	1031.000	110.00	5.000
45	9:30: 0	2.750	1037.000	110.00	6.000
46	9:33: 0	2.800	1043.000	110.00	6.000
47	9:36: 0	2.850	1046.000	110.00	3.000
48	9:39: 0	2.900	1050.000	110.00	4.000
49	9:42: 0	2.950	1055.000	110.00	5.000
50	9:45: 0	3.000	1057.000	110.00	2.000

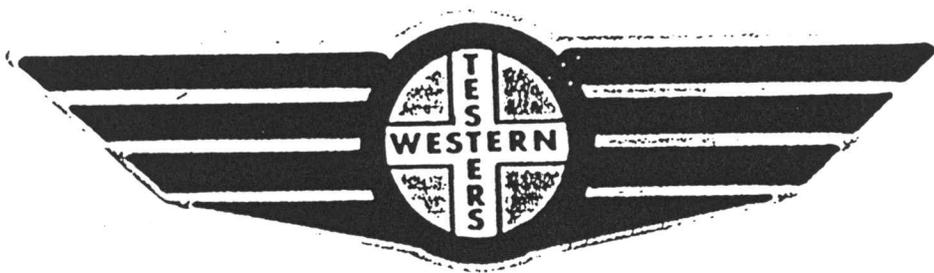


Inside Recorder



Outside Recorder

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY

K & E PETROLEUM, INC.

LEASE & WELL NO.

JOHNSON A-1

SEC. 33

TWP.

6S

RGE. 21W

TEST NO.

6

DATE

7/14/87

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 7-14-87 TICKET : 12924
CUSTOMER : K & E PETROLEUM INC. LEASE : JOHNSON
WELL : A-1 TEST: 6 GEOLOGIST : T. PRIEST
ELEVATION : 2230 GL FORMATION : CONG SAND
SECTION : 33 TOWNSHIP : 6S
RANGE : 21W COUNTY : GRAHAM STATE : KANSAS
GAUGE SN# : 13544 RANGE : 4100 CLOCK : 12

INTERVAL FROM : 3721 TO : 3745 TOTAL DEPTH : 3745
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 3716 SIZE : 6.63
PACKER DEPTH : 3721 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ABERCROMBIE RIG #4
MUD TYPE : CHEMICAL VISCOSITY : 39
WEIGHT : 9.4 WATER LOSS (CC) : 12.8
CHLORIDES (PPM) : 8000
JARS-MAKE : - SERIAL NUMBER : -
DID WELL FLOW ? : - REVERSED OUT ? : -

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 569 FT I.D. inch : 2.75
DRILL PIPE LENGTH : 3130 FT I.D. inch : 3.80
TEST TOOL LENGTH : 22 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 24 FT ANCHOR SIZE : 5.50
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5 XH

BLOW COMMENT #1 : INITIAL FLOW-WEAK BLOW-BUILDING TO 4 INCHES.
BLOW COMMENT #2 : FINAL FLOW-WEAK BLOW-BUILDING TO 2 INCHES.
BLOW COMMENT #3 :
BLOW COMMENT #4 :

RECOVERED : 10 FT OF: OIL GRAVITY 25
RECOVERED : 120 FT OF: MUD CUT OIL
20% MUD-80% OIL

Total Barrels Fluid = 0.95
Total Fluid Prod Rate = 11.46 BFPD
Indicated Oil Rate = 9.34 BOPD
Indicated Wtr Rate = 0.21 BWPD
Corrected Oil Rate = 7.43 BOPD
Corrected Wtr Rate = 0.17 BWPD

REMARK 1 :
REMARK 2 :
REMARK 3 :
REMARK 4 :

SET PACKER(S) : 3:10 AM

TIME STARTED OFF BOTTOM : 7:40 AM

WELL TEMPERATURE : 112

INITIAL HYDROSTATIC PRESSURE

(A) 1835

INITIAL FLOW PERIOD MIN: 45

(B) 39 PSI TO (C) : 50

INITIAL CLOSED IN PERIOD MIN: 60

(D) 901

FINAL FLOW PERIOD MIN: 75

(E) 62 PSI TO (F) : 72

FINAL CLOSED IN PERIOD MIN: 90

(G) 936

FINAL HYDROSTATIC PRESSURE

(H) 1757

WESTERN TESTING CO. INC.
WICHITA - KANSAS

Pressure Transient Report

COMPANY : K & E PETROLEUM INC.
RIG : GRAHAM-KANSAS
FIELD : JOHNSON
WELL : A-1
DATE : 7-14-87
GAUGE NO : 13544

OPERATIONAL COMMENTS

COMPANY : K & E PETROLEUM INC.
WELL : A-1
GAUGE # : 13544
DATE : 14/ 7/87

FIELD : JOHNSON
JOB # : 12924
DEPTH : 3745
TEST :

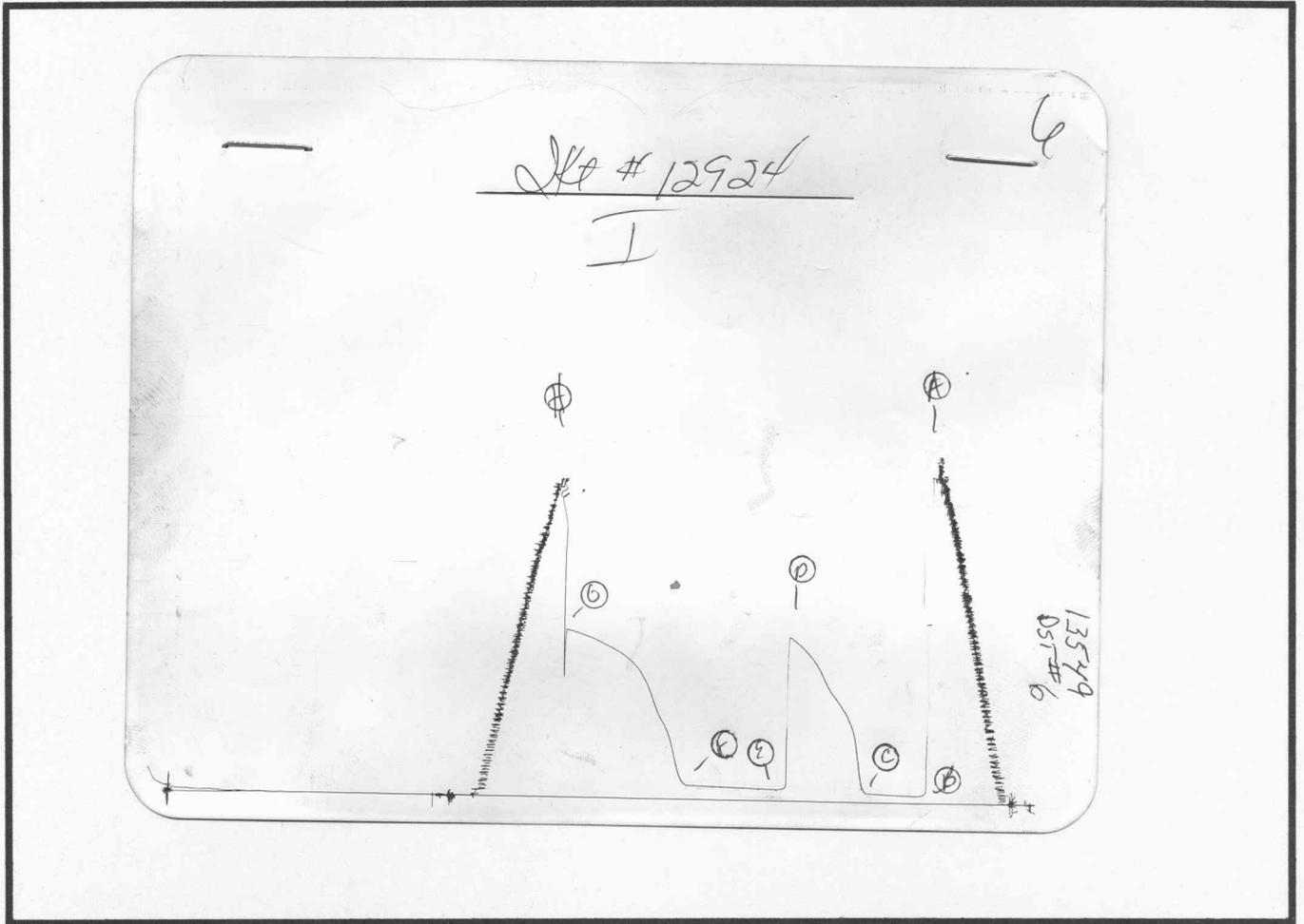
DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	3:10:0	0.000	39.000	112.00	0.000
2	3:14:59	0.083	39.000	112.00	0.000
3	3:20:0	0.167	39.000	112.00	0.000
4	3:25:0	0.250	39.000	112.00	0.000
5	3:29:59	0.333	39.000	112.00	0.000
6	3:35:0	0.417	41.000	112.00	2.000
7	3:40:0	0.500	41.000	112.00	0.000
8	3:44:59	0.583	45.000	112.00	4.000
9	3:50:0	0.667	47.000	112.00	2.000
10	3:55:0	0.750	50.000	112.00	3.000
11	3:58:0	0.800	68.000	112.00	18.000
12	4: 1: 0	0.850	129.000	112.00	61.000
13	4: 4: 0	0.900	283.000	112.00	154.000
14	4: 7: 0	0.950	297.000	112.00	14.000
15	4:10:0	1.000	454.000	112.00	157.000
16	4:13:0	1.050	497.000	112.00	43.000
17	4:16:0	1.100	530.000	112.00	33.000
18	4:19:0	1.150	561.000	112.00	31.000
19	4:22:0	1.200	590.000	112.00	29.000
20	4:25:0	1.250	614.000	112.00	24.000
21	4:28:0	1.300	651.000	112.00	37.000
22	4:31:0	1.350	698.000	112.00	47.000
23	4:34:0	1.400	737.000	112.00	39.000
24	4:37:0	1.450	768.000	112.00	31.000
25	4:40:0	1.500	803.000	112.00	35.000
26	4:43:0	1.550	827.000	112.00	24.000
27	4:46:0	1.600	850.000	112.00	23.000
28	4:49:0	1.650	870.000	112.00	20.000
29	4:52:0	1.700	889.000	112.00	19.000
30	4:55:0	1.750	901.000	112.00	12.000
31	4:56:0	1.767	62.000	112.00	-839.000
32	4:59:59	1.833	62.000	112.00	0.000
33	5: 5: 0	1.917	62.000	112.00	0.000
34	5:10:0	2.000	62.000	112.00	0.000
35	5:14:59	2.083	62.000	112.00	0.000
36	5:20:0	2.167	62.000	112.00	0.000
37	5:25:0	2.250	62.000	112.00	0.000
38	5:29:59	2.333	66.000	112.00	4.000
39	5:35:0	2.417	66.000	112.00	0.000
40	5:40:0	2.500	66.000	112.00	0.000
41	5:44:59	2.583	66.000	112.00	0.000
42	5:50:0	2.667	66.000	112.00	0.000
43	5:55:0	2.750	66.000	112.00	0.000
44	5:59:59	2.833	70.000	112.00	4.000
45	6: 5: 0	2.917	72.000	112.00	2.000
46	6:10:0	3.000	72.000	112.00	0.000
47	6:13:0	3.050	81.000	112.00	9.000
48	6:16:0	3.100	110.000	112.00	29.000
49	6:19:0	3.150	168.000	112.00	58.000
50	6:22:0	3.200	258.000	112.00	90.000
51	6:25:0	3.250	339.000	112.00	81.000
52	6:28:0	3.300	391.000	112.00	52.000

COMPANY : K & E PETROLEUM INC.
WELL : A-1
GAUGE # : 13544
DATE : 14/ 7/87

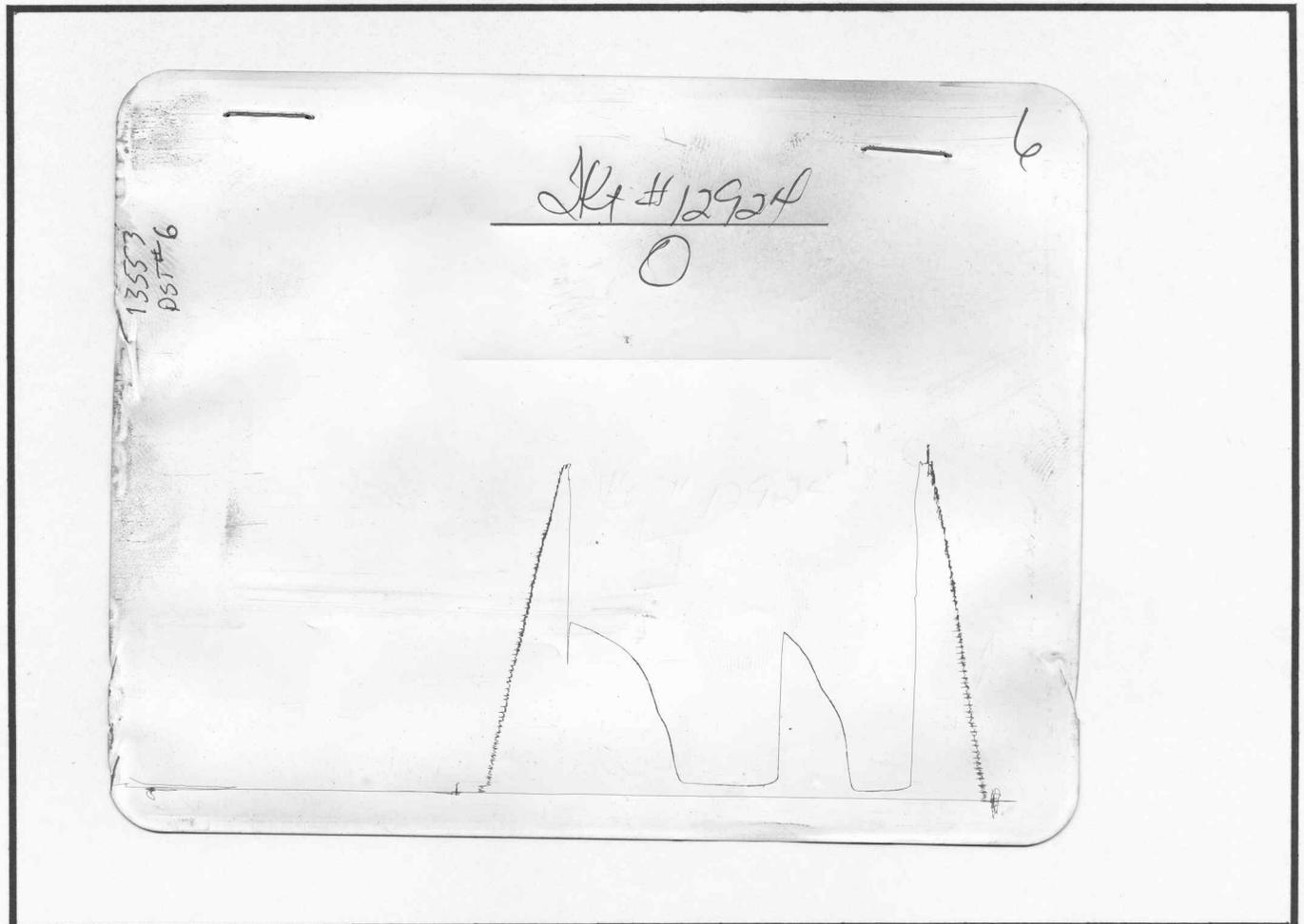
FIELD : JOHNSON
JOB # : 12924
DEPTH : 3745
TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
53	6:31: 0	3.350	433.000	112.00	42.000
54	6:34: 0	3.400	472.000	112.00	39.000
55	6:37: 0	3.450	522.000	112.00	50.000
56	6:40: 0	3.500	579.000	112.00	57.000
57	6:43: 0	3.550	635.000	112.00	56.000
58	6:46: 0	3.600	674.000	112.00	39.000
59	6:49: 0	3.650	711.000	112.00	37.000
60	6:52: 0	3.700	725.000	112.00	14.000
61	6:55: 0	3.750	762.000	112.00	37.000
62	6:58: 0	3.800	803.000	112.00	41.000
63	7: 1: 0	3.850	811.000	112.00	8.000
64	7: 4: 0	3.900	825.000	112.00	14.000
65	7: 7: 0	3.950	838.000	112.00	13.000
66	7:10: 0	4.000	848.000	112.00	10.000
67	7:13: 0	4.050	858.000	112.00	10.000
68	7:16: 0	4.100	870.000	112.00	12.000
69	7:19: 0	4.150	879.000	112.00	9.000
70	7:22: 0	4.200	891.000	112.00	12.000
71	7:25: 0	4.250	901.000	112.00	10.000
72	7:28: 0	4.300	905.000	112.00	4.000
73	7:31: 0	4.350	913.000	112.00	8.000
74	7:34: 0	4.400	924.000	112.00	11.000
75	7:37: 0	4.450	928.000	112.00	4.000
76	7:40: 0	4.500	936.000	112.00	8.000

WESTERN TESTING CO. INC.



Inside Recorder



Outside Recorder

COMPANY: K & E PETROLEUM INC.
 FIELD: JOHNSON

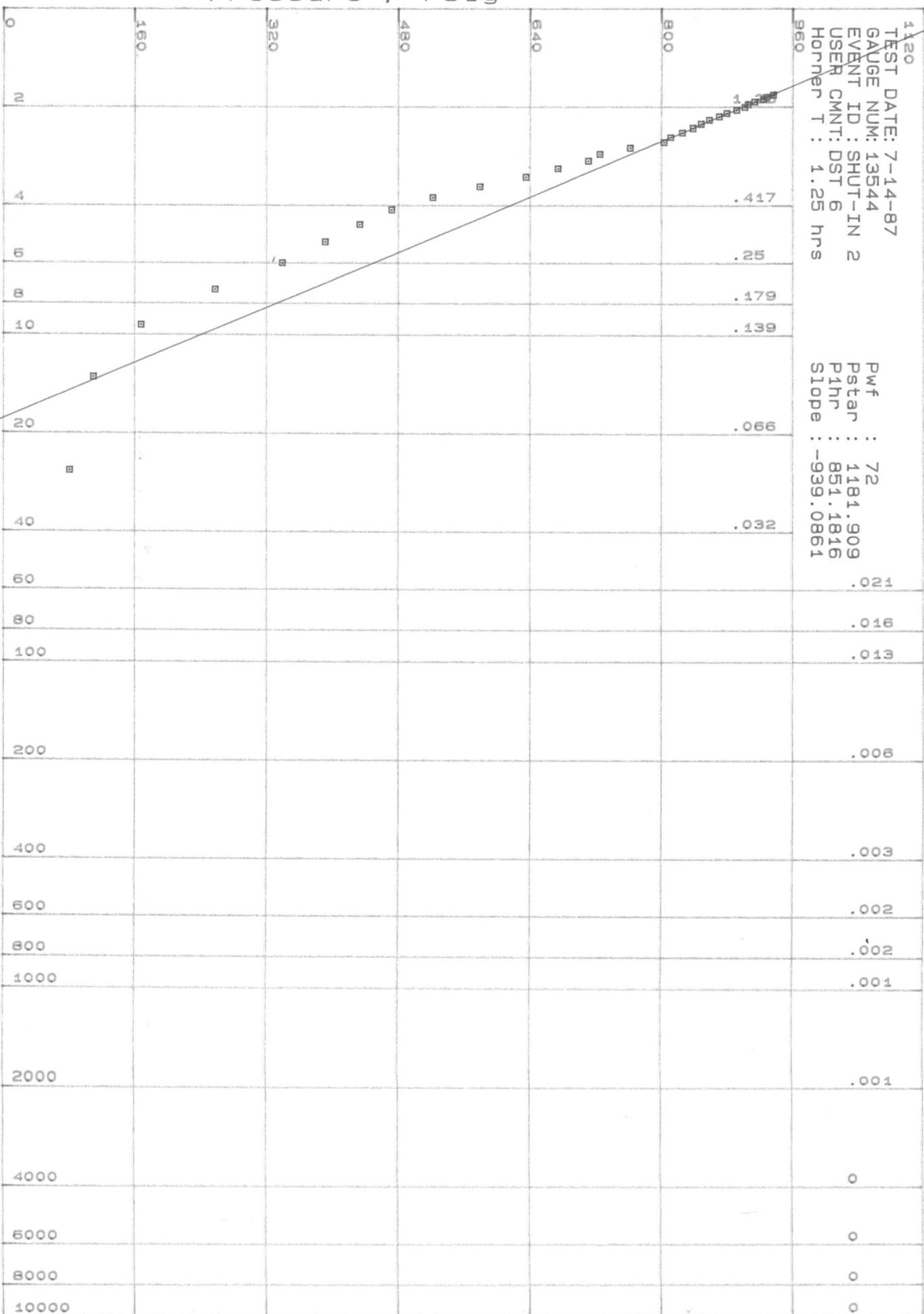
WELL # : A-1
 LOCATION: GRAHAM-KANSAS

PROCESSED: 07-14-1987
 ENGINEER: LARRY KING

TEST DATE: 7-14-87
 GAUGE NUM: 13544
 EVENT ID: SHUT-IN 2
 USER CMNT: DST 6
 Horner T: 1.25 hrs

Pwf : 72
 Pstar : 1181.909
 P1hr : 851.1816
 Slope : -939.0861

Pressure, Psig



Job No. 12924
 WESTERN TESTING CO. INC.

Horner Ratio, (T+dt)/dt

RES-TRAN

WESTERN TESTING CO. INC.
WICHITA - KANSAS

WELL TEST ANALYSIS REPORT
HORNER METHOD
SHUTIN No. 2

COMPANY K & E PETROLEUM INC.
DATE 7-14-87
FIELD JOHNSON
WELL A-1
AREA GRAHAM-KANSAS
JOB NUMBER 12924
GAUGE NUMBER 13544
GAUGE DEPTH 3745
ZONE TESTED 3721-3745

PHASE : OIL FUNCTION : PRESSURE

=====I=N=P=U=T====D=A=T=A====S=U=M=M=A=R=Y=====

THICKNESS	H	5.0000E+00	Feet
POROSITY	POR	1.2000E-01	Frac
VISCOSITY	U	2.4000E+00	Cp
FORMATION VOLUME FACTOR	B	1.0002E+00	Rb/stb
TOTAL COMPRESSIBILITY	Ct	2.0500E-05	Psi ⁻¹
WELLBORE RADIUS	Rw	5.2000E-01	Feet
DRAINAGE RADIUS	Re	1.5000E+03	Feet
RESERVOIR TEMPERATURE	T	1.1200E+02	Deg F
GRAVITY OF FLUID	G	2.5000E+01	
PVT EVALUATION PRESSURE	P	0.0000E+00	Psig
PRESSURE AT SHUT-IN	Pwf	7.2000E+01	Psig
FINAL RECORDED PRESSURE	Ps	9.3600E+02	Psig
PRODUCTION RATE	Q	1.1460E+01	Bbl/day
TOTAL FLOW TIME	T	1.2500E+00	Hours

=====R=E=G=R=E=S=S=I=O=N====R=E=S=U=L=T=S=====

LEAST SQUARE RESULTS OVER THE INTERVAL :
FROM 2 TO 1.85

SLOPE OF THE LINE	9.3909E+02	psi/cycle
FALSE PRESSURE, PSTAR	1.1819E+03	psi
PRESSURE AT 1 HOUR	8.5118E+02	psi

=====A=N=A=L=Y=S=I=S====R=E=S=U=L=T=S=====

TRANSMISSIBILITY	Kh/u	1.9848E+00	md-ft/cp
FLOW CAPACITY	Kh	4.7634E+00	md-ft
PERMEABILITY to PHASE	K	9.5269E-01	md
DAMAGE RATIO	Dr	4.4740E-01	
RADIUS OF INVESTIGATION	Rinv	1.4587E+01	ft
SKIN FACTOR	S	-1.6818E+00	
AVERAGE PRESSURE	Pbar	1.1819E+03	psig
DIMENSIONLESS TIME	Tda	7.5333E-06	
MATTHEWS-BRONS-HAZEBROEK	PDmbh	9.4666E-05	

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 7-14-87 TICKET : 12924
CUSTOMER : K & E PETROLEUM INC. LEASE : JOHNSON
WELL : A-1 TEST: 6 GEOLOGIST : T. PRIEST
ELEVATION : 2230 GL FORMATION : CONG SAND
SECTION : 33 TOWNSHIP : 6S
RANGE : 21W COUNTY : GRAHAM STATE : KANSAS
GAUGE SN# : 13544 RANGE : 4100 CLOCK : 12

INTERVAL FROM : 3721 TO : 3745 TOTAL DEPTH : 3745

DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 3716 SIZE : 6.63
PACKER DEPTH : 3721 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ABERCROMBIE RIG #4
MUD TYPE : CHEMICAL VISCOSITY : 39
WEIGHT : 9.4 WATER LOSS (CC) : 12.8
CHLORIDES (PPM) : 8000
JARS-MAKE : - SERIAL NUMBER : -
DID WELL FLOW ? : - REVERSED OUT ? : -

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 569 FT I.D. inch : 2.75
DRILL PIPE LENGTH : 3130 FT I.D. inch : 3.80
TEST TOOL LENGTH : 22 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 24 FT ANCHOR SIZE : 5.50
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5 XH

BLOW COMMENT #1 : INITIAL FLOW-WEAK BLOW-BUILDING TO 4 INCHES.
BLOW COMMENT #2 : FINAL FLOW-WEAK BLOW-BUILDING TO 2 INCHES.
BLOW COMMENT #3 :
BLOW COMMENT #4 :

RECOVERED : 10 FT OF: OIL GRAVITY 25
RECOVERED : 120 FT OF: MUD CUT OIL
20% MUD-80% OIL

Total Barrels Fluid = 0.95
Total Fluid Prod Rate = 11.46 BFPD
Indicated Oil Rate = 9.34 BOPD
Indicated Wtr Rate = 0.21 BWPD
Corrected Oil Rate = 7.43 BOPD
Corrected Wtr Rate = 0.17 BWPD

REMARK 1 :
REMARK 2 :
REMARK 3 :
REMARK 4 :

SET PACKER(S) : 3:10 AM TIME STARTED OFF BOTTOM : 7:40 AM
WELL TEMPERATURE : 112
INITIAL HYDROSTATIC PRESSURE (A) 1835
INITIAL FLOW PERIOD MIN: 45 (B) 39 PSI TO (C) : 50
INITIAL CLOSED IN PERIOD MIN: 60 (D) 901
FINAL FLOW PERIOD MIN: 75 (E) 62 PSI TO (F) : 72
FINAL CLOSED IN PERIOD MIN: 90 (G) 936
FINAL HYDROSTATIC PRESSURE (H) 1757

WESTERN TESTING CO. INC.
WICHITA - KANSAS

Pressure Transient Report

COMPANY : K & E PETROLEUM INC.
RIG : GRAHAM-KANSAS
FIELD : JOHNSON
WELL : A-1
DATE : 7-14-87
GAUGE NO : 13544

OPERATIONAL COMMENTS

COMPANY : K & E PETROLEUM INC.
 WELL : A-1
 GAUGE # : 13544
 DATE : 14/ 7/87

FIELD : JOHNSON
 JOB # : 12924
 DEPTH : 3745
 TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	3:10:0	0.000	39.000	112.00	0.000
2	3:14:59	0.083	39.000	112.00	0.000
3	3:20:0	0.167	39.000	112.00	0.000
4	3:25:0	0.250	39.000	112.00	0.000
5	3:29:59	0.333	39.000	112.00	0.000
6	3:35:0	0.417	41.000	112.00	2.000
7	3:40:0	0.500	41.000	112.00	0.000
8	3:44:59	0.583	45.000	112.00	4.000
9	3:50:0	0.667	47.000	112.00	2.000
10	3:55:0	0.750	50.000	112.00	3.000
11	3:58:0	0.800	68.000	112.00	18.000
12	4:1:0	0.850	129.000	112.00	61.000
13	4:4:0	0.900	283.000	112.00	154.000
14	4:7:0	0.950	297.000	112.00	14.000
15	4:10:0	1.000	454.000	112.00	157.000
16	4:13:0	1.050	497.000	112.00	43.000
17	4:16:0	1.100	530.000	112.00	33.000
18	4:19:0	1.150	561.000	112.00	31.000
19	4:22:0	1.200	590.000	112.00	29.000
20	4:25:0	1.250	614.000	112.00	24.000
21	4:28:0	1.300	651.000	112.00	37.000
22	4:31:0	1.350	698.000	112.00	47.000
23	4:34:0	1.400	737.000	112.00	39.000
24	4:37:0	1.450	768.000	112.00	31.000
25	4:40:0	1.500	803.000	112.00	35.000
26	4:43:0	1.550	827.000	112.00	24.000
27	4:46:0	1.600	850.000	112.00	23.000
28	4:49:0	1.650	870.000	112.00	20.000
29	4:52:0	1.700	889.000	112.00	19.000
30	4:55:0	1.750	901.000	112.00	12.000
31	4:56:0	1.767	62.000	112.00	-839.000
32	4:59:59	1.833	62.000	112.00	0.000
33	5:5:0	1.917	62.000	112.00	0.000
34	5:10:0	2.000	62.000	112.00	0.000
35	5:14:59	2.083	62.000	112.00	0.000
36	5:20:0	2.167	62.000	112.00	0.000
37	5:25:0	2.250	62.000	112.00	0.000
38	5:29:59	2.333	66.000	112.00	4.000
39	5:35:0	2.417	66.000	112.00	0.000
40	5:40:0	2.500	66.000	112.00	0.000
41	5:44:59	2.583	66.000	112.00	0.000
42	5:50:0	2.667	66.000	112.00	0.000
43	5:55:0	2.750	66.000	112.00	0.000
44	5:59:59	2.833	70.000	112.00	4.000
45	6:5:0	2.917	72.000	112.00	2.000
46	6:10:0	3.000	72.000	112.00	0.000
47	6:13:0	3.050	81.000	112.00	9.000
48	6:16:0	3.100	110.000	112.00	29.000
49	6:19:0	3.150	168.000	112.00	58.000
50	6:22:0	3.200	258.000	112.00	90.000
51	6:25:0	3.250	339.000	112.00	81.000
52	6:28:0	3.300	391.000	112.00	52.000

COMPANY : K & E PETROLEUM INC.
WELL : A-1
GAUGE # : 13544
DATE : 14/ 7/87

FIELD : JOHNSON
JOB # : 12924
DEPTH : 3745
TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P $P_i - P_{(i-1)}$
53	6:31: 0	3.350	433.000	112.00	42.000
54	6:34: 0	3.400	472.000	112.00	39.000
55	6:37: 0	3.450	522.000	112.00	50.000
56	6:40: 0	3.500	579.000	112.00	57.000
57	6:43: 0	3.550	635.000	112.00	56.000
58	6:46: 0	3.600	674.000	112.00	39.000
59	6:49: 0	3.650	711.000	112.00	37.000
60	6:52: 0	3.700	725.000	112.00	14.000
61	6:55: 0	3.750	762.000	112.00	37.000
62	6:58: 0	3.800	803.000	112.00	41.000
63	7: 1: 0	3.850	811.000	112.00	8.000
64	7: 4: 0	3.900	825.000	112.00	14.000
65	7: 7: 0	3.950	838.000	112.00	13.000
66	7:10: 0	4.000	848.000	112.00	10.000
67	7:13: 0	4.050	858.000	112.00	10.000
68	7:16: 0	4.100	870.000	112.00	12.000
69	7:19: 0	4.150	879.000	112.00	9.000
70	7:22: 0	4.200	891.000	112.00	12.000
71	7:25: 0	4.250	901.000	112.00	10.000
72	7:28: 0	4.300	905.000	112.00	4.000
73	7:31: 0	4.350	913.000	112.00	8.000
74	7:34: 0	4.400	924.000	112.00	11.000
75	7:37: 0	4.450	928.000	112.00	4.000
76	7:40: 0	4.500	936.000	112.00	8.000

WESTERN TESTING CO. INC.

WESTERN TESTING CO. INC.
WICHITA - KANSAS

Pressure Transient Report

COMPANY : K & E PETROLEUM INC.
RIG : GRAHAM-KANSAS
FIELD : JOHNSON
WELL : A-1
DATE : 7-14-87
GAUGE NO : 13544
TEST : SHUT-IN 2

COMPANY : K & E PETROLEUM INC.
 WELL : A-1
 GAUGE # : 13544
 DATE : 14/ 7/87
 Comment : SHUT-IN 2
 Horner T: 1.25 Hours

FIELD : JOHNSON
 JOB # : 12924
 DEPTH : 3745
 TEST :

DATA No.	REAL TIME HR:MM:SS	EVENT TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	HORNER (T+dt)/dt	DELTA P PSIG
46	6:10: 0	0.000	72.000	112.00	0.0000	0.000
47	6:13: 0	0.050	81.000	112.00	26.0000	9.000
48	6:16: 0	0.100	110.000	112.00	13.5000	38.000
49	6:19: 0	0.150	168.000	112.00	9.3333	96.000
50	6:22: 0	0.200	258.000	112.00	7.2500	186.000
51	6:25: 0	0.250	339.000	112.00	6.0000	267.000
52	6:28: 0	0.300	391.000	112.00	5.1667	319.000
53	6:31: 0	0.350	433.000	112.00	4.5714	361.000
54	6:34: 0	0.400	472.000	112.00	4.1250	400.000
55	6:37: 0	0.450	522.000	112.00	3.7778	450.000
56	6:40: 0	0.500	579.000	112.00	3.5000	507.000
57	6:43: 0	0.550	635.000	112.00	3.2727	563.000
58	6:46: 0	0.600	674.000	112.00	3.0833	602.000
59	6:49: 0	0.650	711.000	112.00	2.9231	639.000
60	6:52: 0	0.700	725.000	112.00	2.7857	653.000
61	6:55: 0	0.750	762.000	112.00	2.6667	690.000
62	6:58: 0	0.800	803.000	112.00	2.5625	731.000
63	7: 1: 0	0.850	811.000	112.00	2.4706	739.000
64	7: 4: 0	0.900	825.000	112.00	2.3889	753.000
65	7: 7: 0	0.950	838.000	112.00	2.3158	766.000
66	7:10: 0	1.000	848.000	112.00	2.2500	776.000
67	7:13: 0	1.050	858.000	112.00	2.1905	786.000
68	7:16: 0	1.100	870.000	112.00	2.1364	798.000
69	7:19: 0	1.150	879.000	112.00	2.0870	807.000
70	7:22: 0	1.200	891.000	112.00	2.0417	819.000
71	7:25: 0	1.250	901.000	112.00	2.0000	829.000
72	7:28: 0	1.300	905.000	112.00	1.9615	833.000
73	7:31: 0	1.350	913.000	112.00	1.9259	841.000
74	7:34: 0	1.400	924.000	112.00	1.8929	852.000
75	7:37: 0	1.450	928.000	112.00	1.8621	856.000
76	7:40: 0	1.500	936.000	112.00	1.8333	864.000

WESTERN TESTING CO. INC.